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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/798,880	03/12/2004	R. Stanley Brown	2002-057-02US	4890

7590 04/14/2006

Stephen J. Scribner  
PARTEQ Innovations, Room 1625  
Biosciences Complex  
Queen's University at Kingston  
Kingston, ON K7L 3N6  
CANADA

EXAMINER

NWAONICHA, CHUKWUMA O

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 04/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center"><b>Office Action Summary</b></p>	<p>Application No.</p> <p align="center">10/798,880</p>	<p>Applicant(s)</p> <p align="center">BROWN ET AL.</p>	
	<p>Examiner</p> <p align="center">Chukwuma O. Nwaonicha</p>	<p>Art Unit</p> <p align="center">1621</p>	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 February 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-12, 14-37 and 42-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14-37 and 42-45 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

**Current Status**

1. This action is responsive to Applicants' amendment of 28 February 2006.
2. Receipt and entry of Applicants' amendment is acknowledged.
3. Claims 1-12, 14-37 and 42-45 are under active consideration in the instant application.

***Claim Rejections - 35 USC § 103***

The rejection of claims 1-14, 17-22, 24-26, 28-31 and 33-36 under 35 U.S.C. 103 as being anticipated by Franke et al., {WO 02/072206 A1} in view of Neverov et al., {La<sup>3+</sup>-Catalyzed Methanolysis of Phosphate Diesters. Remarkable Rate Acceleration of the Methanolysis of Diphenyl Phosphate, Methyl *p*-Nitrophenyl Phosphate, and Bis(*p*-nitrophenyl) Phosphate, *Inorg. Chem.*; (Article); 2001; 40(14); 3588-3595} for the reasons set forth in the previous Office Action of 7/13/05 is withdrawn in favor of a new rejection.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 26 and 42-45 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 26 and 42-45 are indefinite the claims recites trade names. Correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

**Claim** 1-12, 14-37 and 42-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Franke et al., {WO 02/072206 A1} in view of Platt, {Reaction of Lanthanide Nitrates with Dimethylbenzoylphosphonate, Polyhedron, 12, No. 5, 461-472, 1993}.

Applicants' claim a method for decomposing a neutral organophosphorus compound comprising subjecting said neutral organophosphorus compound to an alcoholysis reaction in a substantially non-aqueous medium comprising non-radioactive metal ions selected from the group consisting of lanthanide series metal ions, transition

metal ions, and combination thereof, and at least a trace amount of alkoxide ions, wherein, through said alcoholysis reaction, said organophosphorus compound is decomposed; wherein all the variables are as defined in the claims.

**Determination of the scope and content of the prior art (M.P.E.P. §2141.01)**

Franke et al. teach a basic, non-aqueous decontamination process, used as detoxification agent with a universal effect against chemical weapons for detoxifying military and civil technical means and devices, buildings and streets; whereby said basic, non-aqueous decontamination fluid comprises 20 to 40 wt. % of an aliphatic C<sub>2</sub>-C<sub>6</sub> alcohol; 20 to 40 wt. % of an aliphatic C<sub>2</sub>-C<sub>6</sub> aminoalcohol; 20 to 50 wt % of a cyclic C<sub>2</sub>-C<sub>6</sub> acid amide and/or an aliphatic C<sub>2</sub>-C<sub>6</sub> diamine, 0.5 to 2.6 Mol/l of an alkali alkoxide and/or an alkali aminoalkanoxide.

**Ascertainment of the difference between the prior art and the claims (M.P.E.P. §2141.02)**

Franke et al. basic, non-aqueous decontamination process differs from the instantly claimed process in that Franke et al. do not teach a process wherein lanthanide series metal ions and transition metal ions are employ. Franke et al. teach 0.5 to 2.6 Mol/l of an alkali alkoxide while applicants claim about 0.1 to 2 equivalents of the concentration of the metal ions. Another difference between applicants claimed invention and Franke et al. is that applicants claim a process that employs lanthanide series metal ions while Franke et al. is silent about these metals.

However, Platt teaches a reaction process in which lanthanide nitrates and dimethylbenzoylphosphonate are reacted in methanol. Platt specifically teaches the

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alcoholysis (methanolysis) decomposition of a neutral organophosphorus compound with lanthanides. See reaction scheme on page 469.

**Finding of prima facie obviousness—rational and motivation (M.P.E.P. §2142-2143)**

The instant claimed process for decomposing a neutral organophosphorus compound would therefore have been suggested to one of ordinary skill because one wishing to decompose a neutral organophosphorus compound is taught to select the processes of Franke et al. and Platt.

One of ordinary skill in the art would have a reasonable expectation of success in practicing the instant invention by varying the process conditions taught by Franke et al. and Platt to arrive at the instantly claimed process for decomposing a neutral organophosphorus compound. Said person would have been motivated to practice the teaching of the references cited because they demonstrate that neutral organophosphorus compound (unsafe compound) can be decomposed (to a safe compound) with a lanthanides and alkoxide ions. Thus, the variation of the process conditions for decomposing a neutral organophosphorus compound is not a patentable distinction because the references cited teach the elements of the claimed invention with sufficient guidance, particularity, and with a reasonable expectation of success, that the invention would be *prima facie* obvious to one of ordinary skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chukwuma O. Nwaonicha whose telephone number is

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571-272-2908. The examiner can normally be reached on Monday thru Friday, 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann R. Richter can be reached on 571-272-0646. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Chukwuma O. Nwaonicha, Ph.D.  
Patent Examiner  
Art Unit: 1621

**SIKARL A. WITHERSPOON**  
**PATENT EXAMINER**

(For)   
\_\_\_\_\_  
Johann R. Richter, Ph.D., Esq.  
Supervisory Patent Examiner,  
Technology Center 1600